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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,019	10/11/2005	Guisheng Yang	187141/US	1322
25763 7590 05/20/2009 DORSEY & WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT SUITE 1500 50 SOUTH SIXTH STREET MINNEAPOLIS, MN 55402-1498				
EXAMINER				
WOODWARD, ANA LUCRECIA				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
05/20/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/553,019

**Applicant(s)**

YANG ET AL.

**Examiner**

Ana L. Woodward

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claims 11-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 11 and 20, it is unclear as to whether the matrix nylon and the long-chain nylon can be the same nylon material. In this regard, it is noted that the matrix nylon does not distinguish over the “long-chain nylon” species prepared by the homopolymerization or copolymerization of lactams or amino acids, e.g., nylon 8, nylon 9, nylon 11, nylon 12, nylon 13 as well as the co-condensation nylons. As presently recited, the matrix nylon and the long chain nylon read on one and the same entity and do not distinguish over each other.

In claims 11 and 20, “poly(telephthaloyl-2,2,4-trimethyl hexamethylene diamine)” and “poly(3-t-butyl-hexanedioyl heptamethylene diamine)” are not art-recognized nylons.

In claims 15 and 24, it is unclear as to whether or not the polymerization is limited to the recited processes.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-15, 19-24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable U.S. 4,714,718 (Horn et al).

Horn et al disclose nylon moldings having high impact strength obtained by activated alkaline polymerization of caprolactam, reading on presently claimed cyclic lactam as defined when  $n = 5$ , in the presence of an amorphous or partially crystalline polycondensate which has a solubility of not less than 5% by weight in caprolactam at 120 C. Suitable polycondensates include nylons reading on presently claimed long-chain nylon, for example, nylons obtained from an aliphatic or aromatic dicarboxylic acid of 4 to 12 carbon atoms and aliphatic diamines of 4 to 20 carbon atoms (column 2, lines 45-65, etc.).

It would have been within the purview of the reference's general disclosure, and thus obvious to one having ordinary skill in the art, to have employed a polycondensate falling within the scope of the presently claimed long-chain nylon with the reasonable expectation of success.

#### ***Response to Arguments***

4. Applicants' arguments filed February 18, 2009 have been fully considered but they are not persuasive.

Applicants' argument that there is a difference in monomers between the nylons of Horn et al and those recited in the present claims is not understood. The caprolactam used by patentees meets the presently claimed cyclic lactam as defined when  $n = 5$ . The polycondensate used by patentees includes nylons reading on the presently claimed long-chain nylon, for example, nylons obtained from an aliphatic or aromatic dicarboxylic acid of 4 to 12 carbon atoms and aliphatic diamines of 4 to 20 carbon atoms. Thus, the reference encompasses materials falling within the scope of the present claims, which given their similarity would be reasonably expected to meet all the characteristics governing applicants' product. Applicants

have not established that the product of the present claims is not the same as or obvious from that set forth by the reference.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ana L. Woodward/  
Primary Examiner  
Art Unit 1796